

Ken Barat's Retirement

My last day at LBNL will be Friday Sept 28. So we have

59 Days, if I was counting.

LSO Posting

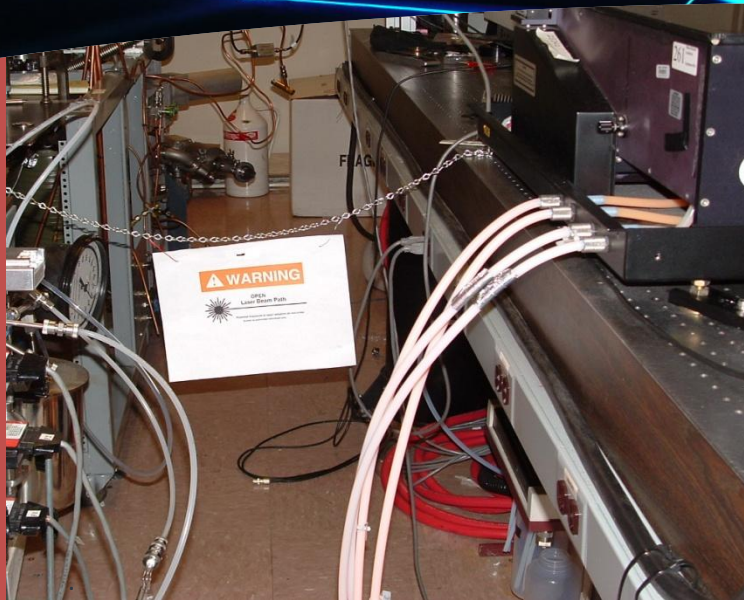
Is open for applications, see posting # 74821

LASER Safety Web Page

If you have not visited the Laser Safety Web page, check L in the LBNL A-Z Index, you are missing out on some a great deal of useful information

Little known

fact According to FAA, since June 2011, 28 people have faced charges related to the use of lasers against airplanes



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Laser Vendor Fair

Sept 19 cafeteria, mark the date, 3-5 PM
Exhibits and FREE FOOD

UCB Explosion

Mid July 2012, a researcher was injured by an explosion of a glass beaker containing laser dye and solvent (4 liters methanol). It seems the researcher placed the bottle on a stirring plate that was also a heating plate in a fume hood. While transferring from the hood to a secondary container on the floor the CAPPED bottle exploded. She was only wearing prescription glasses and no lab coat when the beaker exploded, causing laceration to her face and chest. Safety glasses and the use of a lab coat would have reduced the degree of injuries. The lab is now coated with yellow laser dye. Others in the lab reacted promptly and correctly, which reduced the trauma of her injury. Similar information on <http://www.facebook.com/pages/UC-Berkeley-Lab-Safety/232681106751972>

Laser incident at SLAC - LCSL Injector room

An IT staff member (trained in laser safety) was working between two adjacent rooms. One was laser safe the other had open exposed laser beams. Policy called for him to put his eyewear on each time he entered the laser room. The IT person admits that at least for 5 minutes he was in the laser room without eyewear. Later that evening he experienced discomfort in both eyes. Follow up evaluation indicates he may have been exposed to visible scattered light of sufficient intensity to cause this effect. Unfortunately and the bigger issue is he waited close to three weeks before telling anyone. He did go to his personnel doctor the day after his symptoms appeared. No signs of physical injury were noted. By waiting no real chance of evaluating what happen could take place, and we are just left with speculation and a reported laser incident.

Cleaning Optics



Through everyday use, optics can come in contact with contaminants such as dust, water, and skin oils. These contaminants increase scatter off the optical surface and absorb incident radiation, which can create hot spots on the optical surface, resulting in permanent damage. Optical components with coatings are particularly susceptible to this sort of damage. There are a select number of proven techniques for cleaning optics. We all know not all optics can be cleaned in the same way or material. Today there are a number of excellent resources on how to clean optics. Below are some of those web site addresses:

<http://www.newport.com/Technical-Note-Care-and-Cleaning-of-Optics/141176/1033/content.aspx>

<http://www.edmundoptics.com/learning-and-support/technical/learning-center/application-notes/optics/cleaning-optics/>

www.edmundoptics.com/learning-and-support/.../marketing-literature/?...

http://www.astro-tom.com/tips_and_advice/cleaning_optics.htm

<http://www.coherent.com/Service/index.cfm?fuseaction=forms.page&pageID=39>

<http://www.janostech.com/support/cleaning.html>

Welcome to Bob Fairchild

Many of you know Bob from his work in the Radiation Protection Group, in particular the X-ray safety program. Bob will become 40% Laser Safety once I retire. If we have not visited your lab, we will before Sept 28th comes around. A second person is being sort to be the primary LSO (60%).



LASER POINTERS @ LOS ALAMOS

Last month, one of LANL directorates had a management assessment. As part of that, workers were asked to bring in laser pointers so that their power could be tested. There was one green pointer that measured at 27 mW and a blue one at 13 mW. Overall, 12% of all laser pointers measured were over the limit. Stated product limits either 1 or 5 mW.

CAN YOU NAME THE MOVIE THIS LASER ADAPTED QUOTE COMES FROM?
SEND YOUR ANSWERS BACK TO ME, THE PERSON OR GROUP WITH THE
MOST CORRECT WILL WIN A PRIZE. {Ken Barat MS-71-259}

1. I feel the need – the need for lasing
2. Gentlemen you can't lase in here! This is a laboratory!
3. Synchrotron radiation , for lack of a better word is good
4. Say hello to my little iris!
5. Mama always said research was like a box of chocolates. You never know what results you're gonna get.
6. It Works! It Works!
7. I'm as mad as hell, and I 'm not going to take ladder training anymore
8. There is no place like LBNL
9. "Fiber Optics is people"
10. I'm going to make him eyewear he can't refuse
11. They call me Mister LSO
12. May the interlock be with you
13. Show me the Eyewear!
14. I want to be safe
15. You're going to need a bigger beam block
16. I have just one word for you "Lasers"
17. ANSI we have a problem
18. There's no crying in laser safety
19. As God is my witness, I'll never be unsafe again
20. Of all the job shops in all the towns in the world. OSHA walks into mine
21. Is it safe?
22. Forget it, Jake it's DOD
23. Interlocks? We ain't got no interlocks! We don't need no interlocks! I don't have to show you any stinking interlocks
24. Listen to them, Photons of the light. What music they make
25. Today, I consider myself the luckiest LSO on the face of the earth
26. I see trained people
27. You had me at full funding
28. How dare you. No how dare your sir! move a beam block
29. They can take away our equipment, they can take away our Grad students, but they cannot take away our safety culture
30. I'm always on the lookout for the next ex-LSO
31. Why do my eyes hurt? You've never worn eyewear

KEEP READING MORE NEWS ON NEXT 2
PAGES

JET BLUE FLIGHT TO JFK – PILOT SUFFERS EYE INJURY- GREEN LASER

<http://gma.yahoo.com/blogs/abc-blogs/jetblue-pilot-suffers-eye-injury-green-laser-124347171--abc-news-topstories.html>

The JetBlue flight was preparing to land in New York City after a short hop from Syracuse when a piercing ray of light shot into the cockpit, directly into the eyes of the pilot. Flight 657 landed safely at John F. Kennedy International Airport, but the incident Sunday was the latest example of a brazen trend that aviation officials say continues to grow at airports nationwide. Last year, there were 3,592 reported laser incidents at U.S. airports, according to the Federal Aviation Administration. In 2010, the number was 2,836.

In a statement, JetBlue said the Embraer 190, with 80 passengers, was on approach to JFK when the laser beamed into the cockpit. The plane "landed uneventfully at 9:19 p.m.," the airline said, adding that airline security and police were investigating the incident. An FAA report said a flight crew member "sustained minor injury to the eye" when struck by the laser. Neither the FAA nor JetBlue released additional details. LaserPointerSafety.com, which monitors laser incidents worldwide, said the FAA defines laser eye injuries as anything from after-images to watering, normal consequences of a bright light being beamed into the eye.

In one incident cited by LaserPointerSafety, the pilots of a medical helicopter in England were repeatedly beamed by a laser last September as they tried to land to pick up a man suffering a [heart attack](#). An ambulance eventually was dispatched to get the patient, who died. Medical helicopters and law enforcement vehicles are frequent targets of laser attacks. Earlier this month, a Florida man was arrested for aiming a laser pointer at a sheriff's helicopter in [Polk County](#). The 44-year-old man sought to blame the store for selling him a dangerous device, telling police "he did not understand why the stores would sell a laser pointer if the laser pointer is illegal to use," according to local media reports. In California, a 23-year-old man was arrested in May for allegedly pointing a laser at a Pasadena police helicopter. It was the city's ninth laser incident so far this year. Photonics Online Newsletter info@photonicsonline.com

Terahertz application: Airport Security Scanning Without You Knowing It July 13, 2012 By Ron Grunsby

Within one to two years, the U.S. Department of Homeland Security (DHS) could have a laser-based molecular scanner in place at airports and border crossings that can scan people for traces of dangerous substances without them even knowing it. The scanner was developed by [Genia Photonics](#), who claims the [picosecond programmable laser](#) system can detect trace amounts of explosives, chemical agents, and hazardous biological substances from up to 50 meters away. DHS is funding the project through the not-for-profit, strategic investment firm In-Q-Tel. The device relies on a very advanced form of spectroscopy, using terahertz radiation to characterize

materials. The device can penetrate materials such as wood, leather, cloth, ceramics, plastic, and paper. It can even detect high levels of adrenaline in the bloodstream. Due to the speed in which it works — it basically reads the environment in real time — and its very high level of sensitivity, this device could thoroughly scan *everyone* in an airport's terminals, which means that the process of singling out people for extra security measures could become unnecessary. Personal rights and privacy issues will also have to be addressed.

Science Humor

- Why did the white bear dissolve in water? Because it was polar.
- What do you call a tooth in a glass of water? A one molar solution.
- What do dipoles say in passing? "Have you got a moment?"
- Why does hamburger have lower energy than steak? Because it's in the ground state.
- What do you do with a dead chemists? Barium
- What weapon can you make from the elements potassium, nickel and iron? A KNiFe.
- What did one titration tell the other? Let's meet at the endpoint.
- Why are chemists great for solving problems? They have all the solutions.
- Did you hear about the chemist who was reading a book about Helium? He just couldn't put it down
- Why did Carbon marry Hydrogen? They bonded well from the minute they met.
- What kind of ghosts haunt chemistry faculties? Methylated spirits.

- SAFETY HINT: What's the difference between Chemistry and cooking? In Chemistry, you should never lick the spoon.

- A group of organic molecules were having a party, when a group of robbers broke into the room and stole all of the guest's joules. A tall, strong man, armed with a machine gun came into the room and killed the robbers one by one. The guests were very grateful to this man, and they wanted to know who he was. He replied: My name is BOND, Covalent Bond.